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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,870	07/18/2003	Takako Adachi	55750 CON (45672)	8050

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EXAMINER

FATAHI YAR, MAHMOUD

ART UNIT

PAPER NUMBER

2674

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/622,870

Applicant(s)

ADACHI ET AL.

Examiner

Mike Fatahiyar

Art. Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 16 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7-9 and 11 is/are rejected.
- 7) ☒ Claim(s) 2,4,6,10 and 12 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 09/820,021.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 11/19/04, 3/7/05 and 3/16/05.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The drawings are objected to because In figures 4 and 10, the non-standard electronic elements 11-15 and 21-26 should have descriptive labels. Figure 21 should be labeled "prior art" as specified in the brief description of the drawings. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Usui et al(5,465,102).

Usui et al disclose a liquid crystal display device comprising a liquid crystal layer, an electrode, a driving circuit(figures 3, 6A-6G), wherein the liquid crystal panel exhibits, in its voltage transmittance characteristics, an extreme transmittance at a voltage equal to or lower than a lowest gray-level voltage(column 5, lines 35-51), and the driving circuit supplies to the liquid crystal panel a predetermined driving voltage overshooting a gray-level voltage corresponding to an in image signal of a current vertical period, according to a combination of an input image signal of an immediately preceding vertical period and the input image signal of the current vertical period(column 1, lines 52-66 and column 6, lines 5-16).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Usui et al in view of Yuzu et al(JP 07-33617).

Usui et al is discussed above. Yuzo et al is cited to that the concept of utilizing a liquid crystal layer which is a homogenous-orientation LCD layer(i.e., the same rubbing

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direction) is old(see the abstract). Thus, it would have been obvious to one of ordinary skill in the art to modify the system of Usui et al with the noted teaching of Yuzu et al such that to provide a homogenous-orientation LCD layer because all the applied references are related to driving of an LCD display device and further because utilization of homogenous-orientation LCD layers is considered as conventional in the art of LCD display driving.

6. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Usui et al in view of Ichiro et al(JP 07-199149).

Usui et al is discussed above. Ichiro et al is cited to show that the concept of utilizing a storage capacitor electrically connect in parallel with the liquid crystal capacitor having a capacitance ratio of 1 or more for retaining 90% or more of a charging voltage over a single vertical period is old(see the abstract). Thus, it would have been obvious to one of ordinary skill in the art to modify the system of the Usui et al with the noted teaching of Ichiro et al such that the picture-element capacitor retains 90% or more of a charging voltage over a single vertical period when at least a highest gray-level voltage is applied because both references are related to driving of an LCD display device.

7. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Usui et al and Ichiro et al as applied to claim 7 above, and further in view of Yuzo et al(JP 07-333617).

Usui et al and Ichiro et al are discussed above. Yuzo et al is cited to that the concept of utilizing a liquid crystal layer which is a homogenous-orientation LCD layer(i.e., the same rubbing direction) is old(see the abstract). Thus, it would have been obvious to one of ordinary skill in the art to apply the noted teaching of Yuzo et al to the modified system of Usui et al such that to provide a homogenous-orientation LCD layer because all the applied references are related to driving of an LCD display device and further because utilization of homogenous-orientation LCD layers is considered as conventional in the art of LCD display driving.

8. Claims 2, 4, 6, 10 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Furahashi et al(180), Yamazaki et al, Sakashita, Furahashi et al('181B2) and Usui et al('533) are made of record to show various types of LCD display driving utilizing some sort of overshooting voltage for gray-scale driving.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mike Fatahiyar whose telephone number is (571)272-7688. The examiner can normally be reached on Monday-Friday from 9:30 to 6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard, can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
**XIAO WU**  
**PRIMARY EXAMINER**

  
M. Fatahiyar

September 5, 2005